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EXAMINER

BASOM, BLAINE T

ART UNIT PAPER NUMBER

2173

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,598

Applicant(s)

NAKAJIMA, SATOSHI

Examiner

Blaine Basom

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-21,24-36 and 39-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-21,24-36 and 39-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 September 2000 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION***Response to Arguments***

The Examiner acknowledges the Applicant's amendments to claims 1-6, 9-20, 25-36, and 40-44 in addition to the Applicant's cancellation of claims 7-8, 22-23, and 37-38. In light of these amendments, the objections to claims 1, 7, 9, 10, 11, 25, 27, 37, 40, and 41, as presented in the previous Office Action, are withdrawn. The 35 U.S.C. 112 rejections for claims 8, 13, 14, 23, 28, 29, 38, 43, and 44, as presented in the previous Office Action, are also withdrawn.

Regarding the 35 U.S.C. 102(e) rejection presented in the previous Office Action, the Applicant contends that Cook (U.S. Patent No. 6,178,432), as described in the previous Office Action, teaches display states of constituent parts of the user interface, rather than a display state of the user interface, as is now expressed by the amended claims. In response, the Examiner notes that Cook teaches that the display states of the constituent parts, i.e. the "objects," may be grouped together with a first object, such that in response to user interaction upon the first object, the resulting display states of all the objects can be efficiently determined, as is described more fully below. This grouping of object states is considered a "display state definition," like recited in the claimed invention. Accordingly, the Examiner respectfully maintains that Cook teaches display states of an interface.

The Applicant further contends that the object behaviors described by Cook are not analogous to the claimed state transition rules. The Examiner respectfully disagrees, since as shown below, the behaviors are implemented to determine a display state of the user interface in response to user actuation upon an object.

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Regarding the 35 U.S.C. 103(a) rejection presented in the previous Office Action, the Applicant contends that since the “Control class” taught by Smith (U.S. Patent No. 6,222,537), as described in the previous Office Action, cannot be instantiated in its own right, then it cannot be a “pseudo instantiation” like claimed. The Examiner respectfully disagrees. First, “pseudo,” by definition means false (for example, see the provided definition of “pseudo”). Therefore it is understood that given the broadest, most reasonable definition of “pseudo instantiation,” i.e. a false instantiation, the Control class of Smith may be considered a pseudo instantiation even if it cannot be instantiated. Secondly, the specification of the present application defines a pseudo instantiation, or more particularly, a pseudo display state as: “a display state that in and of itself does not get rendered to form an instantiation of the user interface” (see page 13, lines 14-15). It is consequently understood that the Control class of Smith, which does not get rendered to form an instantiation of the user interface, is analogous to a pseudo instantiation.

The Applicant's arguments have thus been fully considered, but are not persuasive.

Claim Objections

Claims 10, 11, 14, 15, and 25 are objected to because of the following informalities: In claims 10 and 25, the phrase, “said first display state definition, which include state transition rules,” is considered grammatically incorrect. As per claim 11, the recited phrase, “being resulted,” is objected to as being grammatically incorrect. In claim 14, the phrase, “display cell definitions further corresponding comprises,” is considered grammatically incorrect. Regarding

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claim 15, “the first said display state definition,” is objected to, and “said first display state definition” is considered more appropriate. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 7, 10-11, 13-18, 21-22, 25-26, 28-33, 36-37, 40-41, and 43-44 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,178,432, which is attributed to Cook et al. (and hereafter referred to as “Cook”). In general, Cook discusses interactive web pages (see column 1, lines 5-9). Cooks notes that with conventional web pages design, it is not possible for the end user to change the appearance of a web page; instead the user is limited to selecting links which cause different web pages to be displayed (see column 1, lines 30-55). Cooks attempts to overcome this limitation via interactive web page “objects,” which provide dynamic web-based user interfaces without the need to continually download web pages (see column 2, line 51 – column 14). Such interactive objects are considered “cells,” like that of the present application. Consequently, Cook is considered to present a method, like that of claim 1, which is for provisioning a user interface comprised of such cells.

Specifically regarding claims 1 and 2, the interactive objects described by Cook are each generated according to its associated definition within a “hierarchical structured object list,” which specifies the constituent contents of the object, and its functionality (for example, see figure 3B, and its associated description in column 7, line 21 – column 9, line 53). Each object may each exist in one of a plurality of states, such as being in a visible state or in a hidden state; an object in a visible state is displayed, whereas an object in a hidden state is not (for example, see column 3, lines 15-20). In addition, the hierarchical structured object list defines one or more “behaviors” associated with each object; each behavior defining a relationship between an event, an action, and a target object (see column 3, lines 27-38). In response to the event, the particular action is performed on the target object, thus changing the state of the target object (see column 3, lines 27-38). For example, Cook discloses that in response to the user selection of an object, a second object may become visible in the user interface (see column 4, line 39- column 5, line 11). The set of behaviors associated with each object is consequently considered a “state transition rule,” like that recited in the claimed invention. Additionally, Cook discloses that upon retrieval of an interface comprised of such objects, the set of objects associated with the interface are initially downloaded from a server to the client computer, whereby each object is displayed according to its state, meaning it is either visible or hidden (for example, see column 10, lines 5-27). In response to the user interacting with a visible object, the client computer determines if any behaviors are associated with that object, and if so, uses these behaviors to ascertain which objects change state as a result of the user interaction (for example, see column 10, line 35 – column 11, line 40). The client computer thus determines a current display state for the user interface, the new display state defined by the state of each of the objects. Cook

discloses that, instead of searching each of the objects to determine if it changes state in response to the user interacting with a second object, the second object may define all of the behaviors which are associated with the state change of, i.e. user interaction with, the second object (see column 11, lines 21-40). In other words, Cook discloses that the second object may comprise a list of object which change state in response to user interaction with the second object. This list is considered a “first display state definition,” like recited in the claimed invention. Cook is therefore understood to teach determining, by a client computer, a current display state of the user interface in accordance with a second object definition of a second display state definition of the user interface for a second rendered object of an immediately preceding instantiation of the user interface for an immediately preceding display state of the user interface, with which the user interacted. This second object definition includes one or more state transition rules specifying the current display state of the user interface in the event the user interacts with the second object. The client computer provides a current instantiation of the user interface in accordance with a first display state definition corresponding to this determined current display state, the first display state definition including one or more object definitions for the one or more objects in the user interface, while in the current display state.

As per claims 15 and 16, Cook discloses that the above-described objects are generated via an applet (see column 9, line 54 – column 11, line 40), which as known in the art, is implemented via programming instructions. Such an applet is consequently understood to comprise a first plurality of programming instructions, like that recited in claims 15 and 16. Additionally, it is understood that this applet may comprise a second plurality of programming instructions implementing at least one other product function, such as monitoring user interaction

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with the displayed objects (see column 9, lines 40-53; and column 10, lines 35-49). The applet of Cook is thus considered a product like that recited in claims 15 and 16.

Referring to claims 30 and 31, Cook discloses that the above-described method is implemented on a client computer comprising a storage medium and a processor coupled to the storage medium, the processor configured to execute programming instructions stored in the storage medium (for example, see column 7, lines 5-21). Such a computer implementing the above-described method is therefore considered a client device, like that recited in claims 30 and 31.

Concerning claims 3, 4, 17, 18, 32 and 33, the web-based user interface described by Cook may comprise a plurality of objects, each object composing a portion of the user interface (for example, see figure 3A, and its associated description in column 7, line 21 – column 9, line 53). Each object is generated according to its associated definition within a “hierarchical structured object list,” which specifies the constituent contents of the object, and its behaviors, as is described above. It is understood that such a definition is referenced by the first display state definition, which as described above, lists all the objects which change state in response to user interaction with a particular object. Consequently, Cook is considered to teach generating a first portion of the current instantiation of the user interface in accordance with a first object definition for a first object of the user interface, the first object definition specifying constituting contents of the first object of the user interface. Since two or more objects may be simultaneously displayed in the user interface, Cook is also considered to teach generating a second portion of the current instantiation of the user interface in accordance with a second object definition for a second object of the user interface, the second object definition specifying

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constituting contents of the second object of the user interface. Specifically regarding claims 17 and 18, it is understood that the first plurality of programming instructions described above in the rejection for claims 15 and 16 implement such teachings. Similarly regarding claims 32 and 33, it is understood that the programming instructions described above in the rejection for claims 30 and 31 implement these teachings.

In reference to claim 21, Cook notes that a browser is implemented to receive and execute an applet (see column 6, lines 22-45), which as described above, comprises a first and second plurality of programming instructions, like those expressed in claim 15. Such a browser is thus considered a product like that recited in claim 21.

Regarding claim 36, it is understood that the above-described method of Cook may be implemented on any type of client computer having a browser for receiving web pages and running java applets (for example, see column 6, lines 24-45). Consequently, it is understood that such a client computer may be a wireless telephone, a palm sized computer device, or a notebook sized computing device, which are all well-known computers capable of having such a browser.

Referring to claims 6, 20, and 35, the client computer determines a current display state for the user interface in response to user interaction with an object of the display state, specifically by determining if any behaviors are associated with that object, and if so, using these behaviors to ascertain which objects change state as a result of the user interaction, as is described above in the rejection for claims 1 and 2. A current display state for the user interface is thus based on the individual display states of the plurality of objects associated with the

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interface. Consequently, the above-described display state for the interface is considered “multi-dimensional,” like recited in claims 6, 20, and 35.

With respect to claim 10, Cook teaches provisioning by a client computer a first instantiation of a user interface in accordance with a first display state definition corresponding to a current display state of the user interface (for example, see column 10, lines 5-27). The client computer determines a next display state for the user interface based on a user’s interaction with a portion of the first instantiation of the user interface, and in accordance with the first display state definition, which as described above, includes state transition rules correspondingly specifying display states of the user interface to be transition to for various user interactions with various portions of the user interface. It is understood that the next instantiation of the user interface is thus provided in accordance with a second display state definition for the next display state of the user interface.

As per claim 25, Cook discloses that the objects described in the previous paragraph are generated via an applet (see column 9, line 54 – column 11, line 40), which as known in the art, is implemented via programming instructions. Such an applet is consequently understood to comprise a first plurality of programming instructions, like that recited in claim 25. Additionally, it is understood that this applet may comprise a second plurality of programming instructions implementing at least one other product function, such as monitoring user interaction with the displayed objects (see column 9, lines 40-53; and column 10, lines 35-49). The applet of Cook is thus considered a product like that recited in claim 25.

Referring to claim 40, Cook discloses that the method described above in the rejection for claim 10 is implemented on a client computer comprising a storage medium and a processor

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coupled to the storage medium, the processor configured to execute programming instructions stored in the storage medium (for example, see column 7, lines 5-21). Such a computer implementing the above-described method is therefore considered a client device, like that recited in claim 40.

Referring to claim 11, the interactive objects described by Cook are each generated according to its associated definition within a “hierarchical structured object list,” the definition specifying the constituting contents and functionality of each object of the user interface (for example, see figure 3B, and its associated description in column 7, line 21 – column 9, line 53). It is understood that such a definition is referenced by the first display state definition, which as described above, lists all the objects which change state in response to user interaction with a particular object. It is also understood that such object definitions are transmitted from a server to the client computer, in addition to the constituting contents of the objects, whereby the objects are displayed in an initial instantiation of the user interface (for example, see column 9, line 40 – column 10, line 27; and column 6, lines 22-45). Cook thus teaches transmitting by a server to a remote client computer a first display state definition corresponding to a first display state of the user interface, specifying the constituting contents of a first plurality of objects for the instantiation of the user interface for the first display state of the user interface, and whereby these constituting contents are transmitted from the server to the client computer. Cook further teaches that some of the objects which are transmitted may initially exist in a “hidden state,” meaning that such objects are transmitted in advance, prior to any directive to display them (see column 10, lines 5-27). Such objects may be displayed in a subsequent instantiation of the user interface, the subsequent instantiation being generated in response to user interaction within the

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first instantiation of the user interface. For example, Cook discloses that in response to the user selection of a displayed object, a second object may become visible in the user interface (see column 4, line 39-column 5, line 11). Cook is therefore considered to teach transmitting further in advance by the server to the client computer, a second display state definition corresponding to a second instantiation of the user interface, specifying constituting contents for a second plurality of objects for the instantiation of the user interface for the second display state, the second display state being resulted from a first user interaction with the instantiation of the user interface for the first display state, and transmitting in advance by the server to the client computer, the constituting contents for the second plurality of objects for rendering on the client computer in accordance with the second display state definition corresponding to the second display state of the user interface.

As per claims 26 and 41, Cook discloses that a server maintains and transmits the above-described objects (for example, see column 6, lines 22-45). Such a server implementing the method described in the previous paragraph is consequently considered to comprise a first and second plurality of programming instructions, like those recited in claim 26. Additionally, such a server is considered to comprise a storage medium and processor, like those expressed in claim 41.

Regarding claims 13, 14, 28, 29, 43, and 44, an initial instantiation of the web-based user interface described by Cook may initially comprise a plurality of objects (for example, see figure 1A, and its associated description in column 4, line 39 – column 5, line 11), whereby a plurality of additional objects may be displayed in response to user interaction with this initial instantiation of the user interface (see column 10, line 35 – column 11, line 40). As described

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above, such objects are each associated with a definition specifying the constituting contents and state transition rules, the state transition rules indicating display states to transition to in the event of user interaction with the object. Therefore, since the initial instantiation of the user interface may comprise a plurality of objects, and since a plurality of objects may be displayed in a second instantiation of the user interface, it is understood that each of the first and second sets of display state definitions recited in claims 11, 26, and 41 may comprise a plurality of display object definitions specifying the constituting contents and state transition rules for the first and second plurality of objects.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5, 8, 9, 12, 19, 23, 24, 27, 34, 38, 39, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over the U.S. Patent of Cook, which is described above, and also over U.S. Patent No. 6,222,537, which is attributed to Smith et al. (and hereafter referred to as "Smith"). As shown above, Cook presents a method like that of claims 1, 7, and 11, a product like that of claims 15 and 22, a server like that of claims 26 and 41, and a client device like that of claims 30 and 37, whereby a client device provides an instantiation of a user interface in accordance with one or more object definitions, each definition corresponding to an object in the user interface.

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Similarly, and for the reasons described above, Cook is considered to teach a method, product, and client device for generating a first and second portion of a user interface, each portion being in accordance with a display object definition for an object of the interface, and whereby like recited in claims 9, 24, and 39, the object definition specifies constituting contents for the display object. Cook, however, does not explicitly disclose that a portion of the user interface is generated with constituting contents inherited from a pseudo instantiation of the user interface, as is expressed in each of claims 5, 8, 9, 12, 19, 23, 24, 27, 34, 38, 39, and 42.

Like Cook, Smith presents user interface objects, referred to as “controls,” which may be provided within web pages, and which may exist in one of a plurality of states (for example, see column 1, lines 50-62; and column 2, lines 32-45). Additionally like the objects of Cook, which are implemented via the Java programming language (for example, see column 6, lines 24-45 of Cook), the controls described by Smith are implemented via Java code (for example, see column 8, lines 33-39 of Smith). Regarding the claimed invention, Smith discloses that each control may inherit properties from a pseudo control, namely a “Control” component (for example, see column 8, line 50 – column 9, line 20). Smith thus teaches inheriting properties based on a pseudo instantiation of the user interface. The benefits of inheritance are well known in the programming realm.

Consequently, it would have been obvious to one of ordinary skill in the art, having the teachings of Cook and Smith before him at the time the invention was made, to modify the objects of Cook such that they inherit constituting contents from a pseudo object, as taught by Smith. It would have been advantageous to one of ordinary skill to utilize this combination,

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because such pseudo objects reduce the amount of code required to be written for each object, as is demonstrated by Smith.

Conclusion

Applicant's amendment necessitated any new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

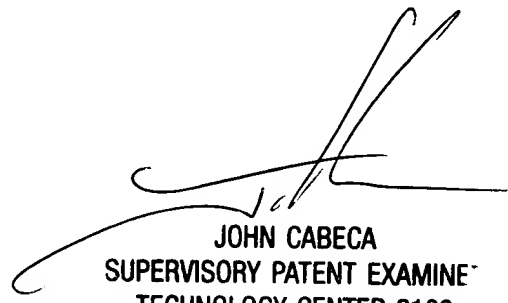
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blaine Basom whose telephone number is (571) 272-4044. The examiner can normally be reached on Monday through Friday, from 8:30 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

btb



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